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Title: Product Life Cycle Planning

Topic Area: E1. Product Life Cycle Planning

Objective: To produce a planning approach for the life cycle of activities associated with the Regional Sediment Management research program – to include technology design, development, testing, documentation, transition planning, insertion, fielding support, revisions and post-implementation evaluation.

Benefits: This effort will help ERDC successfully move products from the RSM Research Program into field operations. Without adequate and consistent planning, many products developed through research programs will be implemented at one or two Districts, and provide little or no benefit to other Districts and other organizations. This plan will provide the Corps Districts will improved information on the requirements for successful technology implementation – including computational and communication requirements, testing methodologies, product installation, training and business adjustments.

This work produces new tools and methods for the USACE and nation. It is an integral part of the Regional Sediment Management Research Program, and thus contributes primarily to support of the USACE's navigation, flood/storm damage reduction, and environmental protection and quality missions. It supports all 8 Civil Works strategic goals and 7 of 9 Listening Session objectives identified by HQUSACE as R&D priorities. With companion work units, it employs active technology transfer and insertion.

Work Description:

RSM Life Cycle Infusion Plan Advisory Group: Because this effort addresses all of the RSM program, and the planning process impacts both technology developers and technology end users, an advisory group should be formed to ensure that there is appropriate review and consideration of all these life cycle concerns. This advisory group needs to include (1) two or three investigators who are developing products to be fielded through RSM (preferably different types of products, such as engineering solutions and decision tools), (2) two or three District members of the RSM field advisory/review group, to ensure that end user considerations are effectively incorporated into the life cycle plans, (3) a Division or HQ proponent to evaluate life cycle plans from the regional/national scale and (4) the RSM Program Management Board. This advisory group should become familiar with the RSM plan, then review the original proposal for the RSM research products life cycle plan, the first draft of this plan and the planning template, and the first product specific plans using this template.

Specific tasks in the proposed effort include the following:

Product Inventory: An initial task for this effort will be to identify and characterize each of the products emerging from the RSM program. A table of product names, types and completion schedules is needed to understand the entire “product line” for RSM. In addition, **data are also needed to identify related ERDC products that are in development from other R&D programs and targeted for fielding with the same end users**– to provide a more balanced understanding of how ERDC investments accumulate within and across research programs. Two products should emerge from this work stage – (1) the inventory and analysis of RSM (and other ERDC program) products, to be used in life cycle planning and analysis, and (2) a marketing/information brochure that identifies the major components of the RSM product line. This marketing/information brochure, posted to the RSM website, should help define the relationships between products, the time sequence of various efforts, and some of the “cumulative” planning issues for successful technology infusion.

Life Cycle Process Plan: This effort will lay out all of the life cycle considerations for RSM products, and describe how these issues will be addressed for each RSM product. This effort will require careful review by the field advisory forum. This plan will describe (1) how products will be designed and developed as a product line, (2) testing and verification for each type of product, (3) the role of and process for technology demonstrations, (4) insertion of technology into USACE operations, (5) technology support services, (6) upgrade and Sustainment requirements, and (7) post-insertion evaluation and adjustments. The plan will also address metrics to be used in developing cost/benefit analysis for each product and in the post-fielding evaluation process. There are three products from this effort – the RSM Life Cycle Process Plan, (2) Life Cycle Planning Templates, to be used by PIs in developing their life cycle plans and (3) LCMIS and Security Documentation for the RSM program/products.

Product Delivery Guidelines: This effort will involve developing templates for delivery of products from Regional Sediment Management. Primarily, these guidelines will be Templates for publications, but this effort will also include instructions about using these templates.

RSM Product Analysis: This phase of the life cycle plan is an analysis of the entire product inventory charted against the planning process. This analysis will help determine what products will be at each life cycle planning phase in each upcoming fiscal year, as a management tool for the RSM program manager and for each investigator. This analysis will also facilitate the planning steps necessary in the field for successful technology infusion, providing details about the actions and costs necessary in each fiscal year relevant to the specific products emerging from RSM.

Current USACE Processes/Culture: This effort will focus on characterizing the current business processes and social/technical cultural practices for sediment management in USACE. Technologies fielded from RSM need to fit into and/or modify these practices and cultures. Successful technology infusion requires that technology developers understand and respond to the current and evolving operational context of the technology users. There are two products from this process – one is a document that characterizes the current business processes and culture for sediment management decisions/activities in USACE. The second product analyzes the RSM product line against these USACE process/culture, and identifies issues and approaches that address these issues to ensure successful technology infusion.

Milestones, Products and Schedule:

The primary products of this work will be an organized, well-thought-out plan for producing and fielding RSM tools.

Task Number	Subtask	Led By	Starting Quarter	Draft Completion	Review and Revision	Final Completion
1	Form Advisory Group	White and Biederharn	2 nd FY02	3 rd FY02	-----	group sustained through RSM effort
2	Product Inventory	Prickett	2 nd FY02	3 rd FY02	4 th FY02	1 st FY03
3	Life Cycle Plan	Goran et al	2 nd FY02	1 st FY03	2 nd FY03	3 rd FY03
4	Life Cycle Templates	Goran et al	3 rd FY02	1 st FY03	2 nd FY03	3 rd FY03
5	LCMIS, Security, etc	S. Smith	3 rd FY02	1 st FY03	2 nd FY03	3 rd FY03
6	Product Delivery Guidelines	White, Wolfe	3 rd FY02	4 th FY02	1 st FY03	2 nd FY03
7	Product Analysis	Prickett	4 th FY02	2 nd FY03	3 rd FY03	3 rd FY03
8	Lessons Learned	Prickett	4 th FY02	2 nd FY03	3 rd FY03	4 th FY03
9	Tech Infusion	McGuire	3 rd FY02	2 nd FY03	3 rd FY03	4 th FY03

Product

1. Advisory Group Formed
2. Product Inventory

Scheduled

Q3/02
Q1/03

3. Product Delivery Guidelines	Q2/03
4. Life Cycle Plan	Q3/03
5. Life Cycle Templates	Q3/03
6. LCMIS Guidelines	Q3/03
7. Product Analysis	Q3/03
8. TN: Lessons Learned	Q4/03
9. White Paper: Tech Infusion	Q4/03